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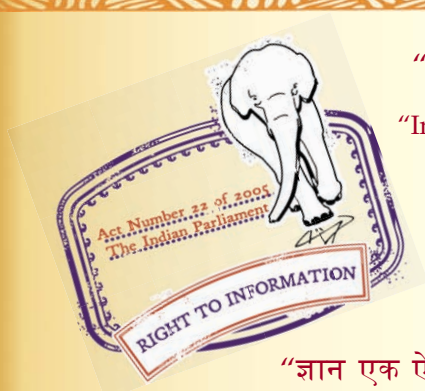
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IS 3339 (1975): Silica flour for use in foundries [MTD 14: Foundry]



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“Knowledge is such a treasure which cannot be stolen”

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Indian Standard
SPECIFICATION FOR
SILICA FLOUR FOR USE IN FOUNDRIES
(*First Revision*)

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BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

Indian Standard

SPECIFICATION FOR SILICA FLOUR FOR USE IN FOUNDRIES (First Revision)

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Indian Standard
**SPECIFICATION FOR
SILICA FLOUR FOR USE IN FOUNDRIES**
(First Revision)

0. FOREWORD

0.1 This Indian Standard (First Revision) was adopted by the Indian Standards Institution on 30 December 1975, after the draft finalized by the Foundry Sectional Committee had been approved by the Structural and Metals Division Council.

0.2 This standard was first published in 1965. While reviewing this standard in the light of the experience gained since its publication, the Committee has modified the grain fineness. References to other Indian Standards has also been made up to date.

0.3 This standard has been prepared to specify the requirements of foundries for silica flour, keeping in view the quality of raw materials available in the country.

0.4 Silica flour is a good refractory material for moulding work. It is used particularly in the steel foundry as dressing for moulds and cores and also for adding to moulding sand mixtures. Silica flour is also used to obtain elevated temperature strength, high density and resistance to metal penetration in cores.

0.5 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS : 2-1960*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

1. SCOPE

1.1 This standard covers the requirements for silica flour for use in foundries.

*Rules for rounding off numerical values (revised).

2. SUPPLY OF MATERIAL

2.1 General requirements relating to the supply of silica flour for use in foundries shall be as laid down in IS : 1387-1967*.

3. SAMPLING

3.1 Representative samples shall be drawn according to the scheme of sampling given in IS : 1811-1961†.

4. MANUFACTURE

4.1 Silica flour shall be produced by crushing, washing and grading the high grade quartz, quartzitic rocks or from white silica sand or other deposits sufficiently pure to get the desired material.

5. CHEMICAL COMPOSITION

5.1 The silica flour, when analyzed in accordance with IS : 1917-1962‡, shall conform to the following requirements:

<i>Characteristic</i>	<i>Requirement</i>
Silica, percent by weight, <i>Min</i>	98.0
Moisture, percent by weight, <i>Max</i>	1.0

6. FUSION POINT

6.1 When tested in accordance with the method given in IS : 1918-1966§, the fusion temperature of silica flour shall be not below 1 700°C.

7. GRAIN FINENESS

7.1 When tested in accordance with the method given in IS : 1918-1966§, 100 percent of silica flour shall pass through 150-micron IS Sieve (see IS : 460-1962||) and at least 95 percent shall pass through 75-micron IS Sieve.

7.2 If required, silica flour of coarser variety may also be supplied subject to the agreement between the purchaser and the manufacturer.

NOTE — The apertures of BS Sieve 100 and 200 and ASTM Sieve 100 and 200 (also known as 149 μ and 74 μ US Standard Sieve respectively) are within the limits laid down for the specified IS Sieves and may, therefore, be used as 150-micron and 75-micron IS Sieves respectively.

*General requirements for supply of metallurgical materials (*first revision*).

†Methods of sampling foundry sands.

‡Methods of chemical analysis of quartzite and high silica sand.

§Methods of physical tests for foundry sands.

||Specification for test sieves (*revised*).

8. PACKING

8.1 Unless specified otherwise, silica flour shall be supplied in polyethene-lined gunny bags each containing 50 kg.

9. MARKING

9.1 The bags containing silica flour shall be clearly marked with the manufacturer's name or trade-mark.

9.1.1 The material may also be marked with the ISI Certification Mark.

NOTE — The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution (Certification Marks) Act and the Rules and Regulations made thereunder. The ISI Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well-defined system of inspection, testing and quality control which is devised and supervised by ISI and operated by the producer. ISI marked products are also continuously checked by ISI for conformity to that standard as a further safeguard. Details of conditions under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors, may be obtained from the Indian Standards Institution.

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